副論文1

Framework Development for the Assessment of Interprofessional Teamwork in Mental Health Settings

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Abstract

In mental health settings, interprofessional practice is regarded as a comprehensive approach to prevent relapse and manage chronic conditions with practice of various teamwork interventions. To reinforce the potential of interprofessional teamwork, it is recommended that theories or conceptual frameworks be employed. There continues, however, to be a limited use of such approaches that assess the quality of interprofessional teamwork in mental health settings. This paper aimed to present a new conceptual framework for the assessment of interprofessional teamwork based on the findings of a scoping review of the literature. This review was undertaken to identify conceptual frameworks utilized in interprofessional teamwork in mental health settings. After reviewing 952 papers, the methodological characteristics extracted from 12 papers were considered. The included studies were synthesised into the Donabedian structure-process-outcome model. The findings revealed that structural issues comprised three elements: professional characteristics, client care characteristics, and contextual characteristics in organizations. Process issues comprised two elements: team mechanisms and community oriented services. Finally, outcome issues comprised the following elements: clients' outcomes and professionals' outcomes. The review findings suggested possibilities for further

development of how to assess the quality of interprofessional teamwork and provided information about what specific approach is required to improve interprofessional teamwork. Future research should utilize various areas and cultures to clarify the adaptation potential.

Keywords: evaluation, framework, interprofessional teamwork, mental health, quality

Introduction

Interprofessional collaborative practice is considered by policymakers, health service managers, and practitioners, as a strategy to strengthen the health workforce internationally and improve the delivery of care in different contexts (e.g. World Health Organization (WHO), 2010; Institute of Medicine (IOM), 2015). Interprofessional teamwork has been defined as an intervention that involves different health and/or social professions who share a team identity and work closely together in an integrated and interdependent manner to solve problems and deliver services (IOM, 2015; Reeves, Lewin, Espin, & Zwarenstein, 2010). This type of intervention has been regarded as the key to improving profession and patient satisfaction, the number of medical errors, workforce retention, systematic efficiencies, and optimal community engagement (e.g. Epstein, 2014; IOM, 2015; WHO, 2010; Zwarenstein, Goldman, & Reeves, 2009).

In mental health settings, interprofessional teamwork is a more comprehensive approach to prevent relapse and manage chronic conditions, which are complex and often require a collaborative response, because many people suffer from both physical and mental problems (WHO, 2008). Various teamwork interventions in mental health settings, such as the assertive community treatment (ACT) team, community mental health team,

and psychiatric primary care team have been developed and practiced with positive health outcomes. This has promoted greater acceptance of treatment, reducing hospital admission, avoiding death by suicide, and so on (Malone, Marriott, Howes, Simmonds, & Tyrer, 2007; Reilly et al., 2013; Rosen, Mueser, & Teesson, 2007). However, interprofessional teamwork can generate some problematic factors. For example, many general practitioners still feel that physical health problems are more their concern and see treatment of severe mental illness as the job of psychiatrists and other mental health professionals (Reilly et al., 2013). Additionally, there are still challenges to ensuring collaboration among team members, and the overall quality of care provided to people with mental illness remains poor (Pauze & Reeves, 2010). Service integration requires the re-definition of professions' roles and changes to the existing service culture (WHO, 2013). To make team performance more integrated, it is necessary to reflect and identify ideal strategies as a team.

Social science theories have been offered to attempt to understand the nature and practices related to interprofessional teamwork, such as social psychological and organizational theories (Reeves et al., 2010; Suter et al., 2013). However, only a few theories or frameworks have been presented that can help researchers understand the quality of interprofessional teamwork in mental health settings. To enrich team practice, it has been

argued that theories from educators, practitioners, researchers, and policymakers are required (Reeves & Hean, 2013). In this paper, we present a new conceptual framework for interprofessional teamwork assessment based on the Donabedian structure-process-outcome model (Donabedian, 1988). Consequently, we identify what framework types have been used to explain interprofessional teamwork in mental health settings, and we describe the range of concepts that are offered in these frameworks. Finally, this paper offers a practical framework for assessing the quality of interprofessional teamwork in mental health settings. By proposing a new framework for assessment of interprofessional teamwork in mental health settings, we hope that this research helps support the development of strategies to improve mental health services.

Background

In developing this framework, we decided to apply the Donabedian (1988) structure-process-outcome model—a well-known model for assessing quality of care (Donabedian, 1988). Figure 1 illustrates the Donabedian structure-process-outcome model. In this model, structure refers to staffing, hours of operation, provider workloads, and availability of evidence-based practices; process refers to the extent that evidence-based practices were implemented in terms of frequency and timing; and outcomes denotes the effects of care on the health status of patients including salutary changes of the patients' behaviour and satisfaction with care (Donabedian, 1988).

There were three reasons for the selection of this framework. First, this model proposed the use of process factors in the outcomes evaluation (McGlynn, 1998), an approach that supports the holistic evaluation of interprofessional teamwork because processes linkage provides information about possible processual factors related to team outcomes (Reeves et al., 2010). Second, this model included an explanation of the interaction between clients and professionals, or among professionals—a key element of the model's process section. Mental health services, like other health services, are based on the interaction between clients/patients and professionals (Donabedian, 1980).

Third, this model is organized around three simple concepts that can be applied to a number of different contexts. As successes in mental health settings have been achieved through sensible local application of broad principles (WHO, 2008), we adopted a clearly wider conceptual framework that made it possible to adapt to each of the cultural and social characteristics.

Methods

Approach

We undertook a scoping review to develop a new framework through mapping the available literature (Grant, Booth, & Salford Centre for Nursing, 2009). We proposed a framework to assess the quality of interprofessional teamwork in mental health settings.

Eligibility Criteria

Four selection criteria relating to this study were employed. These provided the necessary parameters for searching and assessing the published evidence for this study. The following criteria were used to select studies: (1) papers had to describe interprofessional teamwork including two or more professionals because interprofessional teamwork involves different health and/or social professions (Reeves et al, 2010); (2) research had to be conducted in mental health settings, as this study focused on mental health settings; (3) papers had to describe details about the model, the framework, or the theory in order to develop a new framework; and (4) papers had to explain the process of integration in interprofessional teams for the use of process factors in the outcomes evaluation.

Search Process

Following the work of Moher et al., (2009) and Reeves, (2001) a three-stage search strategy for this review was adopted. The

first stage involved the development of a search strategy which incorporated a variety of terms such as ‘interprofessional’, ‘teamwork’, ‘theory’, ‘process’, and ‘mental health’ (see Figure 2). To capture a wider range of frameworks, various types of studies were searched, including quantitative studies, qualitative studies, literature reviews, and theoretical studies. The search was restricted to publications written in English. Medline, CINAHL, and PsycINFO databases were used and searching ceased on 31 October 2015.

In the second stage, the abstracts of publications identified by the searches were reviewed by the first author to identify papers that met the selection criteria. In case of uncertainty, the full text was reviewed by one of the co-authors. Lastly, the full text of all publications retained from stage two was reviewed to ensure that papers met all selection criteria. The papers identified were extracted.

Assessment of Included Papers

To assess each conceptual framework, the methodological characteristics of each paper were considered, including the following: location, settings, and approach used for developing frameworks. Additionally, the aims of the framework were identified to understand what phenomena were focused on in interprofessional teamwork.

Analysis and Synthesis

To create a coherent framework for the assessment of interprofessional teamwork in mental health settings, the studies in this review were synthesised into a narrative to encourage a new framework development and show links between issues and mechanisms (Freeth & Reeves, 2004; Hammick, Freeth, Koppel, Reeves, & Barr, 2007; Shadish, Cook, & Campbell, 2002). The synthesis results have implications for helping to assess the quality of interprofessional teamwork, and support its use in mental health settings. This analysis approach accommodated the eclectic nature in order to present the emergent review findings. In this paper, Donabedian's structure-process-outcomes model served as an analytical framework for developing a new framework.

First, all concepts of frameworks derived from the papers were extracted as codes, yielding 66 codes, which were uploaded into NVivo 10 (QSR international, Doncaster, Victoria). Second, these codes were mapped onto the concepts from the Donabedian structure-process-outcome model as a starting point, and we agreed upon a blended list. This work involved populating the structure, the process, and the outcomes sections with extracted points and creating subheadings as needed, because we looked for real and influential mechanisms for the assessment of interprofessional teamwork in mental health settings. Lastly, the narrative findings were confirmed and agreed upon by the

co-authors as described below.

Results

Overview of Studies

After completing the three stages outlined above, 12 papers were obtained (see Figure 3). The following reasons were employed for excluding papers: did not describe factors influencing interprofessional teamwork (n = 8), did not explain procedures of team treatment or planning (n = 2), did not focus on interprofessional collaboration (n = 4), only described a study plan (n = 1), and only described study methods (n = 1).

Table 1 provides a summary of the characteristics of the included papers. Almost all of the studies were conducted in Western countries, across different types of mental health settings (e.g. the community, psychiatric rehabilitation clinics, and service buildings for people with dual disorders). Six papers employed a qualitative approach (Brousselle, Lamothe, Sylvan, Foro, & Perreault, 2010; Cook, Gerrish, & Clarke, 2001; Gulliver, Peck, & Towell, 2002; Hodges, Hernandez, & Nesman, 2003; McCray, 2003; Shaw, Heyman, Reynolds, Davies, & Godin, 2007) and five papers applied previous models or principles for framework development (Bell, Aslani, McLachlan, Whitehead, & Chen, 2007; Eve, 2004; Machin, 1998; McGrath, 1993; Wholey et al., 2012). Additionally, one paper employed a logical analysis approach (Brousselle, Lamothe, Mercier, & Perreault, 2007). Additionally, the derived frameworks focused

on assessing the processes of decision-making; integration; multidisciplinary relations; boundary activity in organization; the relationship among role adequacy, legitimacy, and support; and team moderating and mediating the relationship.

The findings are presented in a narrative form based around Donabedian's headings of structure, process, and outcomes (see Figure 4). From the analysis and synthesis of the included papers, *structure* comprised three categories: 'professional characteristics', 'client care characteristics', and 'contextual characteristics in organizations'; *process* comprised two categories: 'team mechanisms' and 'community oriented services'; and *outcomes* comprised two categories: 'clients' outcomes' and 'professionals' outcomes'.

Structure of Interprofessional Teamwork

Based on the included papers, 'professional characteristics' was formed of two sub-categories: professional characteristics for interprofessional teamwork and professional characteristics for clinical practice. The former referred to the extent that professionals had a better understanding of each other's professional roles and their sense of team identity (Eve, 2004; Gulliver et al., 2002; Machin, 1998). It was reported that these characteristics enabled professionals to make decisions by discussing among team members cooperatively to undertake their respective teamwork tasks. The latter referred to the knowledge

and the clinical skills equipped by clinical practitioners (Brousselle et al., 2007; 2010; Machin, 1998). It was found that professionals needed to take responsibility for their own roles within their interprofessional teams and to complement each other toward integrated services using sufficient knowledge and clinical skills (Machin, 1998).

'Client care characteristics' were associated with an ample understanding of clients' needs, the use of appropriate strategies in specific fields, and involvement from other professionals to access clients' needs (Brousselle et al., 2007; 2010; McCray, 2003; Wholey et al, 2012). It was found that mental health professionals practiced client assessment and intervention in varied ways according to their clinical field. For example, early intervention teams utilized medical and risk assessment according to medical status rather than lifestyle assessment. On the other hand, individuals with a dual diagnosis involving multiple problems (e.g. violence, criminal prosecution, etc.) required several treatment sites and resources (e.g. primary care, long-term care, criminal justice support, child and family protective services, etc.; Brousselle et al., 2007; 2010).

'Contextual characteristics in organizations' referred to the extent that interprofessional teams were designed with fidelity to team identity and whether professionals felt authority toward a collaborative approach within an organizational system

(Brousselle et al., 2007; 2010; Cook et al., 2001; Eve, 2004; Machin, 1998; McCray, 2003; Shaw et al., 2007; Wholey et al., 2012). In general, it was reported that formal systems were best used for expressing explicit information and providing stability in organizational systems (Brousselle et al., 2007; 2010; Hodge et al., 2003; Machin, 1998; Wholey et al., 2012). Therefore, a formal collaborative structure was required to promote high team-performance, sharing of team identity, sharing of information, goal agreement, organizational support, joining team training, and regular team-meetings. Furthermore, it was reported that a constructive context with authority also promoted interprofessional team growth, developmental, and performance capabilities of team members (Cook et al., 2001; Eve, 2004; McCray; 2003; Shaw et al., 2007; Wholey et al., 2012). Even if interprofessional teamwork was practiced with authority, interprofessional conflict can arise because of perceived incompatibilities, opposing interests, or discrepant views among team members (Eve, 2004; Shaw et al., 2007; Wholey et al., 2012). However, it was reported that task-related conflict could be used for team development if effective conflict management approaches were employed (Wholey et al., 2012).

Process of Interprofessional Teamwork

The element of interprofessional teamwork was regarded as a process among professionals or between clients and

professionals that provided integrated mental health services. Analysis of the papers revealed the following two categories: ‘team mechanisms’ and ‘community oriented services’.

Team mechanisms were reported as a variety of skills required to effectively manage interprofessional teamwork such as communication skills, conflict management skills, decision-making skills, leadership, and so on (Bell et al., 2007; Brousselle et al., 2007; 2010; Cook et al., 2001; Eve, 2004; Gulliver et al., 2002; McCray, 2003; Shaw et al., 2007; Wholey et al., 2012). For example, although decision-making through communication was a complex and sometimes problematic process, active involvement of team members in this process could make interprofessional teams more effective (Bell et al., 2007; Cook et al., 2001). Additionally, decision-making affected the likely success or failure of any future strategic or organizational collaboration and the outcomes of collaboration on the client (McCray, 2003). Furthermore, conflict management skills helped professionals express their opinions directly and explore opposing positions when resolving interprofessional conflicts (McCray, 2003; Shaw et al., 2007).

‘Community oriented services’ contained two sub-categories: services based on clients’ needs and dimensions of service integration. Initially, it was found that mental health clients’ needs were derived from their individual situations and recovery

goals, including, dual diagnoses, comorbidities, crises of relapse, and occupational or educational goals (Brousselle et al., 2007; 2010). Services based on clients' needs guided the direction of psychiatric services that clients with mental illness timely required to attain their recovery goals such as medical support, financial support, housing support, daily living support, and social educational or occupational supports (Brousselle et al., 2007, 2010; Hodges et al., 2003; Shaw et al., 2007; Wholey et al., 2012). In other words, psychiatric care and treatment was guided and integrated toward clients' needs. However, it was reported that it was difficult for clients to receive satisfaction for all their needs because of restricted human and social resources available (Brousselle et al., 2007; 2010). Therefore, it was necessary to construct integrated mental health care based on clients' needs within the context of available resources.

Dimensions of service integration referred to how psychiatric services were organized and integrated by interprofessional teams, from an individual approach to a seamlessly integrated service (Brousselle et al., 2007; 2010; Eve, 2004; Hodges et al., 2003; McCray, 2003; McGrath, 1993; Shaw et al., 2007). It was reported that this sub-category was influenced by the structure of the team as well as by team mechanisms (Hodges et al., 2003; McCray, 2003; McGrath, 1993). To make interprofessional teamwork more effective, it was important to comprehensively

judge the current dimension of service integration and consider what limits existed in the structure, team mechanisms, or direction of integrated services, and what was needed to advance toward the next stage of integrated care.

Outcomes of Interprofessional Teamwork

Outcomes consisted of two categories: ‘professionals’ outcomes’ and ‘clients’ outcomes’. These outcomes included both subjective and objective judgement on interprofessional teamwork that was received or provided. The former included burnout, satisfaction, the number of caseloads, and so on. It was found that professionals’ outcomes resulted from sharing necessary information such as clients’ condition, recovery goals, schedule, and related interventions, because sharing information enabled team members to reduce duplication and effectively integrate psychiatric services (Wholey et al., 2012). The professionals’ outcomes of interprofessional teamwork were anticipated to improve workforce retention, system efficiencies, and professionals’ satisfaction.

The latter included clients’ satisfaction, medical status, reducing emergency visits and hospitalizations, the extent of their recovery attained, and so on (Wholey et al., 2012). Services based on clients’ needs will ultimately results in better clients outcomes because adapting care to clients’ diagnosis, needs, and the current situation is provided by interprofessional teams. In

other words, to improve clients' outcomes, it is inevitable to make deviations from the clients' needs apparent and to make the appropriate adjustments.

Discussion

In this study, to understand the nature of interprofessional teamwork in more depth, we undertook a scoping literature review and developed a new framework based on the Donabedian structure-process-outcome model. In doing so, we provided a framework that could help assess the quality of interprofessional teamwork in mental health settings. To understand the intricacies of the assessment of quality of interprofessional teamwork in mental health settings, we discussed this framework using three perspectives: theoretical approach, type, and teamwork focus (Reeves et al., 2010).

The literature utilized in this review used a range of different theoretical or methodological approaches to guide the development of this interprofessional framework. While the review had a broad inclusionary approach to methods and theory, the framework was derived from literature synthesis based only in mental health settings. It used the Donabedian structure-process-outcome model because it offered a holistic approach to assessment. As a result, this framework was developed with the intention of assessing the quality of interprofessional teamwork across a range of mental health settings.

Interprofessional practice types are typically described as three levels: the micro (interactional) level focusing on

individual and group dynamics, the macro (systemic) level focussing on organizational issues such as structural power relations, and the meso (organizational) level focusing on local cultures and information networks (Coyler, Helme, & Jones, 2005; Reeves et al., 2010). Our framework is involved at both the micro and the macro level because it focuses on structures and processes for assessing the quality of interprofessional teamwork within organizations. The structure component in the framework explained organizational issues including professional characteristics, client care characteristics, and contextual characteristics. Additionally, the process component focused on individual and group dynamics such as team mechanisms and community oriented services.

Lastly, our framework focused on the assessment of interprofessional teamwork in mental health settings, a phenomenon that has not received much attention from researchers. This is an important contribution as it helps practitioners reflect on their team performance and improve the quality of psychiatric services provided. In particular, in mental health settings, it is typically difficult to separate medical services from the interactions between clients and professionals because psychiatric services are based on unique and facilitative relationships between clients and professionals. However, medical services are typically practiced with different

interactions, techniques of investigation, interventions, and operations (Donabedian, 1980). Therefore, the process between clients and professionals or among professionals, as well as structure and outcome, should be assessed and monitored for interprofessional teamwork in mental health settings. In other words, comprehensively informed views are required to assess and monitor the quality of interprofessional teamwork in mental health settings. In summary, this framework is useful for the assessment of interprofessional teamwork in organizations across various mental health settings because it comprehensively explains how practitioners should assess for structure, process, and outcomes.

It has been argued that the nature of interprofessional work changes depending upon on the local needs in relation to elements such as unpredictability, urgency, and complexity of the client (Reeves et al., 2010). Using this framework makes it possible for practitioners and researcher to assess the quality of interprofessional teamwork, in which the dimensions of service integration are appropriately decided, to avoid providing excessive or insufficient psychiatric services (WHO, 2005). In particular, this framework could function effectively when utilized for assessing the quality of interprofessional teamwork. For example, when interprofessional teams are not functioning well, this framework can be employed to help provide

professionals with information about quality issues to reflect on specific approaches that could be used to improve the quality of team performance within their local context.

Limitations

This framework was developed from a literature synthesis concerning interprofessional teamwork in mental health settings using the Donabedian structure-process-outcome model. Therefore, this framework was identified and proposed because of a scoping review; however, the amount and type of literature extracted was limited. In addition, it has been acknowledged that further investigation is required to explain the relationships between each concept within the structure-process-outcome model (Donabedian, 1988). Therefore, some care is needed when using this framework. However, it could provide useful information about the quality of interprofessional teamwork and it offers some ideas for strategies that will improve team performance. Future studies are required to investigate the adaptation of this framework for mental health teams.

Conclusions

This paper reported on a scoping literature review that proposed the development of a theoretical framework for the assessment of interprofessional teamwork in mental health settings based on the Donabedian structure-process-outcome model. Based on the included papers from the review, our findings revealed a range of insights about how to assess the quality of team performance using the framework presented in this paper. Further research is now needed to test the feasibility of this framework within mental health care settings.

Declaration of interest

The authors report no conflicts of interest. The authors alone are responsible for the writing and the content of this article.

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Table 1. Study Characteristics.

Citation	Location	Setting	Approach used for developing the framework	Characteristics of frameworks focused on
Bell et al., 2007	Australia	Primary care	Application of model of shared decision making (Charles, 1999) with qualitative approach	The framework for exploring the process of decision making
Brousselle et al., 2007	Canada	Services for people with dual disorders of mental health and substance use	Logical analysis	A conceptual model for analysing integration process
Brousselle et al., 2010	Canada	Services for people with dual disorders of mental health and substance use	Qualitative approach	A conceptual model for service integration
Cook et al., 2001	UK	Community mental health teams	Qualitative approach	The process of decision making

Eve, 2004	UK	Psychiatric rehabilitation	Application of Learning model (Dechant, 1993) with qualitative approach	An explicit framework for organizing and developing best practice
Gulliver et al., 2002	UK	Community mental health teams	Qualitative approach	A theoretical framework to categorise boundary activity in organizations
Hodges et al., 2003	USA	Child mental health	Qualitative approach	A developmental framework for collaboration
Machin, 1998	UK	Community mental health teams	Application of the relationship between role adequacy, legitimacy, and support (Show et al., 1978)	A framework of role adequacy, legitimacy, and support
McCray, 2003	UK	The field of learning disability	Qualitative approach	A conceptual framework for interprofessional practice
McGrath, 1993	UK	Community mental health teams	Application of a needs-led-model (McGrath, 1992)	A framework for service planning and development

Shaw el al., 2007	UK	Forensic psychiatry	Qualitative approach	The complexity of multidisciplinary relational processes involved
Wholey et al., 2012	USA	ACT team	Application of principles common to team dynamics research	A conceptual model of team processes moderating and mediating the relationship between ACT design fidelity and performance

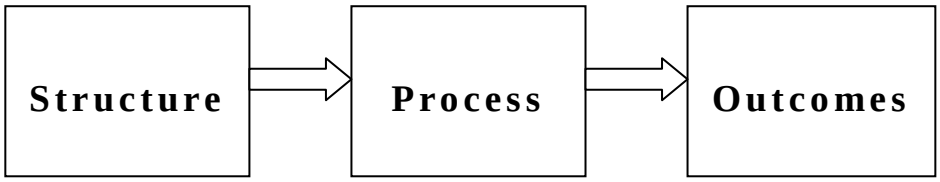

Figure 1. The Donabedian structure-process-outcome model.

```
#1 inter-professional* OR interprofessional*
#2 inter-disciplin* OR interdisciplin*
#3 inter-occupation* OR interoccupation*
#4 inter-institution* OR interinstitution*
#5 inter-agen* OR interagen*
#6 inter-sector* OR intersector*
#7 inter-department* OR interdepartment*
#8 inter-organization* OR interorganization*
#9 inter-organisation* OR interorganisation*
#10 interprofessional relations teams*
#11 multi-profession* OR multiprofession*
#12 multi-disciplin* OR multidisciplin*
#13 multi-institution* OR multiinstitution*
#14 multi-occupation* OR multioccupation*
#15 multi-agen* OR multiagen*
#16 multi-sector* OR multisector*
#17 multi-organization* OR multiorganization*
#18 multi-organisation* OR multiorganisation*
#19 trans-profession* OR transprofession*
#20 trans-disciplin* OR transdisciplin*
#21 #1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9
   OR #10 OR #11 OR #12 OR #13 OR #14 OR #15 OR #16 OR
   #17 OR #18 OR #19 OR #20
#22 collaborat*
#23 teamwork
#24 *patient care team OR patient care team
#25 interprofessional relations
#26 cooperative behavior*
#27 *patient centered care OR patient centered care
#28 #22 OR #23 OR #24 OR #25 OR #26 OR #27
#29 theory
#30 model*
#31 framework
#32 #29 OR #30 OR #31
#33 development
#34 process
#35 #33 OR #34
#36 severe mental illness* OR severe mental health
#37 mental illness* OR mental health OR mental disorder*
#38 mental service*
#39 psychosis OR schizophren* OR depression
#40 forensic psychiatry OR crime
#41 inpatient* OR hospital treatments*
#42 #36 OR #37 OR #38 OR #39 OR #40 OR #41
#43 #21 AND #28 AND #32 AND #35 AND #42
```

Figure 2. Keywords used in database search.

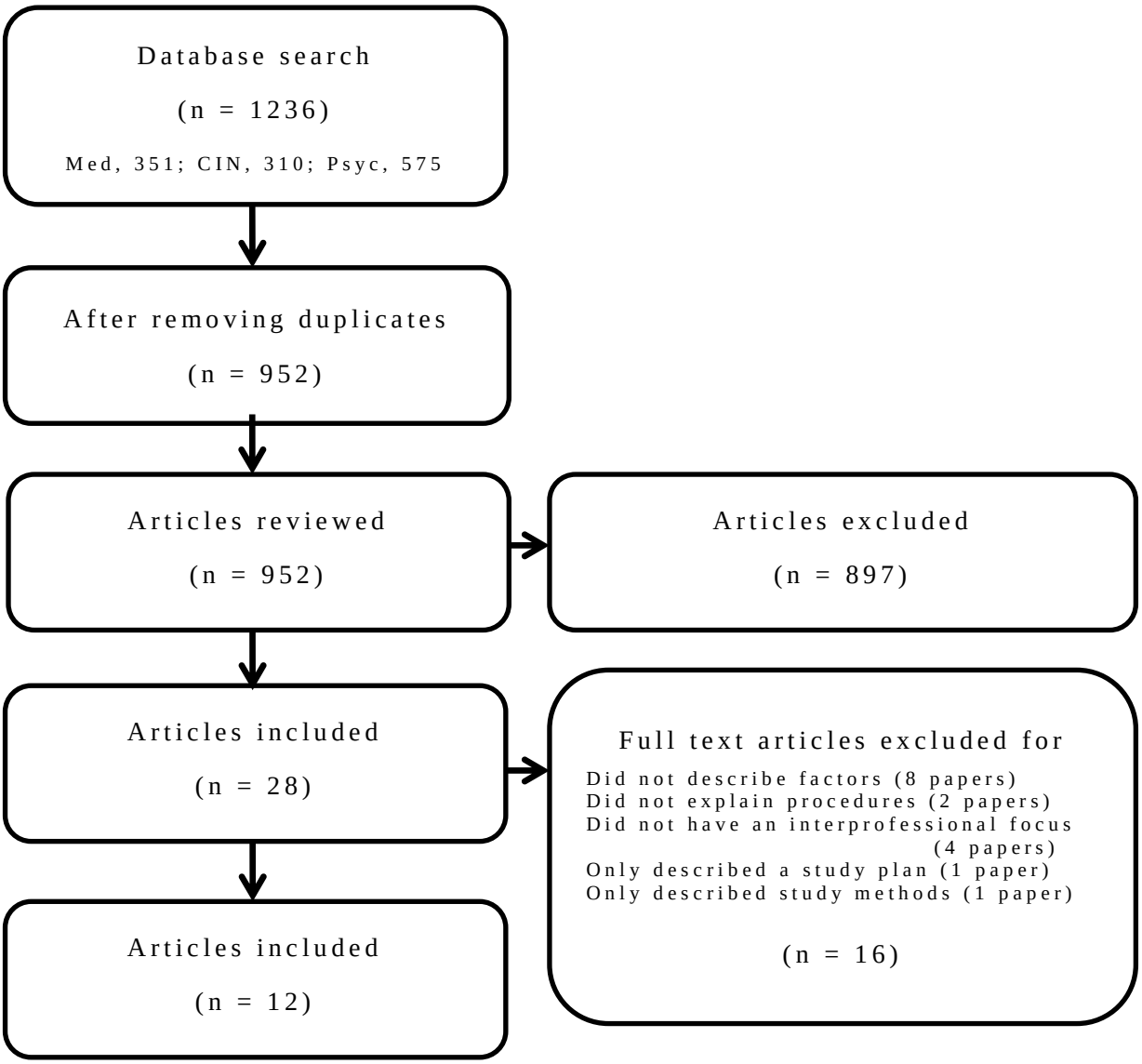

Figure 3. Literature search: Flow diagram.

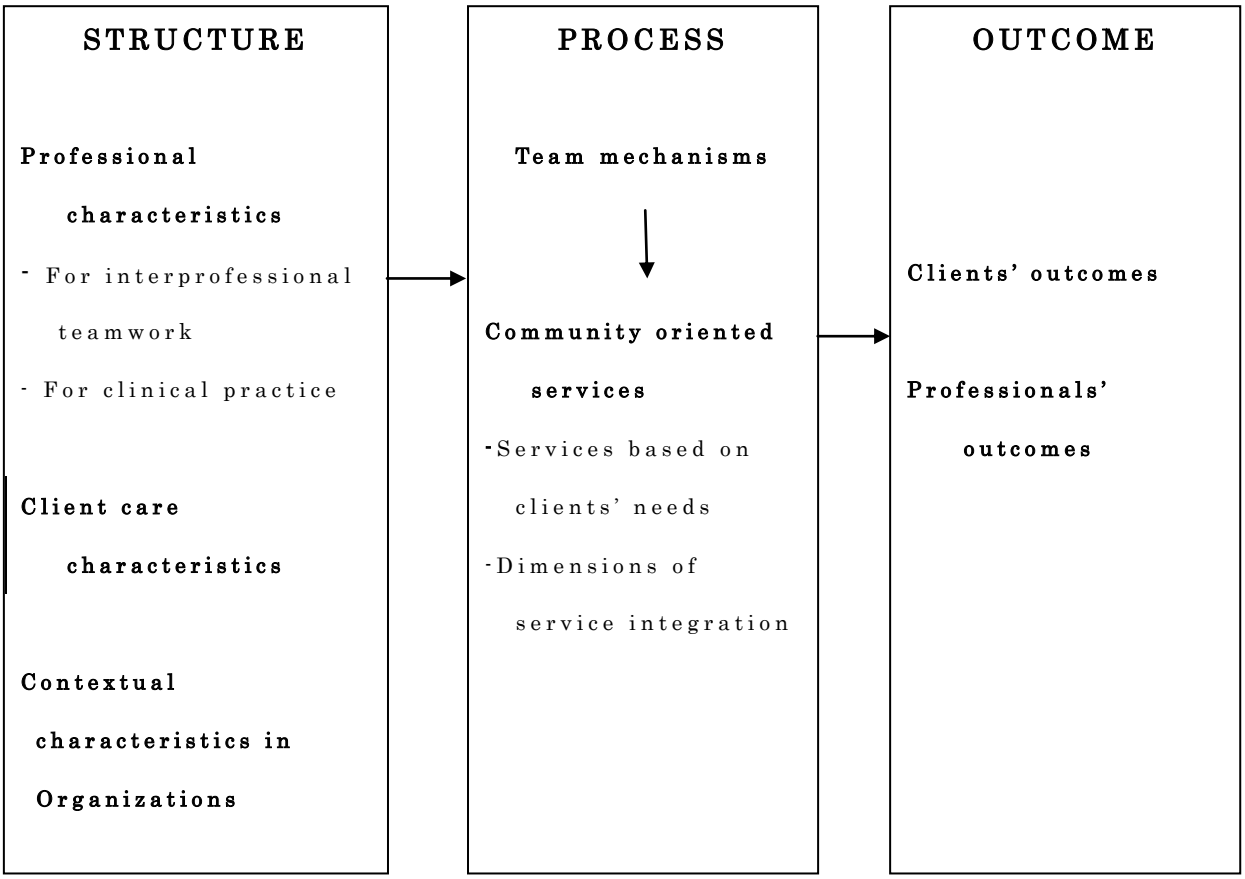

Figure 4. A framework for the assessment of interprofessional teamwork.